Book review

Peter Eisenman: 'The Formal Basis of Modern Architecture'

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For quite a while, Peter Eisenman's dissertation lived the life of a mystery text. Many architectural theorists knew about it, but it was not published until 2006.[1] The facsimile reprint by Lars Müller finally makes available the complete typographic script that Eisenman defended in August 1963 at the University of Cambridge.

Eisenman's formal theory, influenced by Wittkower's pupil, Colin Rowe, who was the American architect's mentor during his time in Cambridge (UK), is based on the primacy of *form*. The notion of space is not discussed. Volume is, in fact, the most important critical category in the text. Architecture, in this framework of interpretation, is a three-dimensional volume developing in time and space. This architectural volume is open to different internal, and, to a certain extent, external forces resulting in distortion and deformation, a line of thought characteristic in Eisenman's career up till the present. In this sense, his dissertation was quite formative for his development both as an architect and a theoretician. In Eisenman's view, architectural thinking in the early sixties tended to emphasise history and iconography, except when issues of techniques and technology were involved. Linguistics and semiotics become architectural issues in the seventies, and Eisenman's dissertation more or less anticipates these concerns and questions.

Additionally, Eisenman's dissertation should be considered as *critical* rather than historical, examining propositions concerning form in a theoretical, not a historical way. 'Critical' in this case, means of course, that this book opposes the account of architecture in social theory. His argument is that logical and objective considerations can provide a conceptual and formal basis for any form of architecture. Eisenman is not interested in the isolation of modern forms per se; he is interested in a language and order which uses geometrical solids as absolute points of reference for any form of architecture. He is looking for an inherent order derived from a geometric reference. To this end, he analyses the work of Le Corbusier, Aalto, Wright and Terragni - the first and the last becoming the most important figures in his own future work; indeed, Terragni's work returns in a new publication in 2003.[2]

Architecture, for Eisenman, is in essence the joining of form to intent, function, structure, and techniques in the sense of primacy in the hierarchy of elements. Eisenman differentiates a subdivision of form into two types: generic and specific. The generic form is Platonic, a form in three dimensions, while the specific is the actual physical configuration in architecture which is realised in response to a particular intent and function. In architecture the emergence of the specific form follows from a consideration of these conditions. No building develops from a Platonic notion of form, but from intent and function. Form in this sense is specific and generic at the same time. Specific forms cannot be judged as good or bad in themselves, and do not comply with any subjective interpretation of beauty, style or taste.

Specific forms should relate to what Eisenman defines as the essence of a building. Form is examined in its relation to structure and techniques; structure may be thought of as the bones, veins and arteries of a building while techniques are, in turn, the ligaments of a building. To be able to understand volume, he introduces the notions of movement and experience. In the development of formal systems there should be clarity and comprehensibility in the transmission of an idea from 'author' to 'receiver', notions from communication theory in the 1950's, and hence the need for a formal ordering. Ordering rests on the systematic organisation of vocabulary; that is to say of volume, mass, surface, and movement. Eisenman attempts to show that architectural systems must develop from both the external situations and the internal functional requirements. In fact, like syntax it governs all organisation. Architecture is considered a formal language with a grammar. Buildings are like language, intentional; indeed, architecture orders itself by certain rules like language. In linguistics 'semantics' is the science of the meaning of words and sentences, the part that is suppressed in Eisenman. 'Grammar' is conceived of as the study of forms and constructions. Words form sentences by being arranged according to strict laws, or order. When treating grammatical categories, traditional grammar distinguishes parts of speech, modalities, and syntactic relationships.[3]

However, semiology concerned with objects has never convincingly shown the difference between structure and grammar. In the end, architecture might have structure or order, but it has no grammar. Inherent in language is a sort of theory of truth in the sense of a distinction between 'sense' and 'nonsense'. Yet no theory of truth for objects exists. In an earlier attempt to analyse Eisenman's Bio-Center entry for Frankfurt, I examined his building as 'semiotic material', a notion I borrowed from Julia Kristeva's linguistic theory.[4] 'Text', for Kristeva, is a specific domain of the semiotic, following syntactical and grammatical rules, which do not apply in the world of non-linguistic systems like architecture.[5] Kristeva's example is painting, Giotto's work in particular. But for painting one could read architecture.

Eisenman's empirical architectural proofs were explicated by eight buildings he analysed in great detail. The beauty of these examples actually lies in the analytical drawings, not in their grammar. Each building is re-drawn by hand and analysed as a field of different forces. Corbusier's Pavillon Suisse in Paris (1930-32) is analysed in the sense of 'compression', 'a crushing action applied to the sides', a 'pressure' that is acknowledged on the rear wall and so on. Proceeding this way, Eisenman can distance himself from notions of 'free form' architecture, a distancing still present in his current work, which, of course, is completely different from his early Houses. Corbusier's Cité de Refuge (1933) in Paris is characterised by the same mechanisms, with a 'suction effect' of the entry bridge. Frank Lloyd Wright's buildings are, in contrast, of a linear nature - one parallel to, and one perpendicular to dominant external axes. The syntax in this case is the resolution of internal and external requirements, and as such becomes quite similar to the syntax used in the two buildings of Le Corbusier.

In Wright's Avery Coonley House (Riverside, Illinois, 1907-8), the development is also based on syntax, but only when aided by his elaborate grammar. In the Martin House, the other example Eisenman discusses, both syntax and grammar can be resolved because of the strong systemic control, whereas in the Coonley House a very strong initial ordering seems to be vitiated by a constantly changing grammar.

With Aalto the possibility of analysis using syntactic models gets even more complex. Alvar Aalto's work is more difficult to understand as a specific grammar. The lack of an easily definable perceptual order gives the impression that there is a lack

of systemic order in his work. Yet also in this case, Eisenman's analysis shows Aalto buildings to be close to the grammar of Corbusier - a dominant volumetric order is combined with a secondary movement order. The so-called 'organic' development of Aalto's work is not in contradistinction to any formal order; his architecture can indeed be analysed in formal terms. Architectural elements are still regulated by a formal syntax and ordered by a formal system.

The work of Terragni, who will play an important role in Eisenman's future work, is analysed as a mass-surface dialectic. Obviously, a concern with an internal volumetric ordering is present in Terragni, but only as it relates to this primary mass-surface system. The Casa del Fascio (1932-6) can be read either as a solid block that has been cut away, or as a series of planes that have been placed together much as a deck of cards. These formal devices seem to originate from an almost academic study of Le Corbusier's notion of mass-surface. But whereas Le Corbusier initially sets up the grid and then plays with surface or mass as a foil to it, Terragni often fuses the two to achieve the desired ambiguity. Subsequently, Eisenman defines a field of forces: the syntactic order is dominant with the cross axis in the Casa del Fascio, accentuated by the three square bays and terminated by the memorial altar which provides a cushion absorbing the pressure at the end of the movement system.

In the last chapter of Eisenman's 1963 dissertation, he discusses closed and open-ended theory. Starting from a brief analysis of the treatises of Alberti and Durand as close-ended, through Choisy, Gaudet, Summerson and Banham, Eisenman arrives at Gropius and Giedion, to present his central argument: the confusion between moral and formal criteria in modern architecture. According to Eisenman, the contemporary critic in the early sixties should not interpret and direct architecture, but rather provide some kind of order, some point of

reference. Theory should abandon both the historical nineteenth-century tradition and the polemical twentieth-century tradition. Theory must establish a system of priorities based on a logical consistency, in other words the formal manifestation of conceptual ideas, excluding both metaphysical consideration and aesthetic preference. Ultimately, Eisenman's dissertation should be understood as an attempt to read architecture as an open-ended system of volume and form. Of course, much could be said about the language-based underpinnings of the dissertation, but the real value of the argument is the precise way in which Eisenman analyses the masterpieces of modern architecture.

In dissertations submitted today, I rarely come across attempts by architects to carry out rigorous formal analysis of buildings realised by others. The contemporary discourse is exclusively about 'the new'. Despite notions of 'the projective' in the USA, 'research by design' in the Netherlands, or other recently introduced concepts dealing with theory and practice, Eisenman's dissertation is unique in its attempt to 'reconstruct' buildings by re-designing them.

Notes

1. Peter Eisenman, *The Formal Basis of Modern Architecture: Dissertation 1963*, *Facsimile* (Baden: Lars Müller Publishers, 2006).
2. See Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques* (New York: Monacelli, 2003).
3. Julia Kristeva, *Language, the Unknown: An Initiation into Linguistics*, translated by A. M. Menke (New York: Columbia University Press, 1989), p. 32.
4. Arie Graafland, 'Peter Eisenman: Architecture in Absentia', in *Peter Eisenman: Recent Projects*, ed. by Arie Graafland (Nijmegen: SUN, 1989), pp. 95-125.
5. Ibid. p. 100.

Biography

Arie Graafland is professor of architectural theory at the Faculty of Architecture Delft University of Technology, and director of the Delft School of Design (DSD). He has published extensively on architecture theory and urban theory. His recent books include *Versailles and the Mechanics of Power* (2003) and *The Socius of Architecture, Amsterdam, Tokyo, New York* (2000). Together with Harry Kerssen he is partner in Kerssen Graafland Architects in Amsterdam.